Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band	)	WT Docket No. 07-195
	)	

COMMENTS OF TROPOS NETWORKS

Tropos Networks (Tropos) submits these comments in response to the Commission's *Notice of Proposed Rule Making (NPRM)* addressing service rules for the 2155-2175 MHz band. The Commission seeks rules that will promote delivering advanced wireless services to American consumers.[1] Tropos urges the Commission to provide opportunity for unlicensed operations in the 2155-2175 MHz band. Unlicensed operations will bring market driven broadband services at substantial cost efficiencies that will accrue directly and expeditiously to consumers.

Tropos Networks

Tropos Networks, headquartered in Sunnyvale, California, provides wireless Wi-Fi technology that delivers broadband access using unlicensed spectrum. In more than 500 deployments, Tropos technology is providing wireless broadband over large geographic areas. Its MetroMesh architecture allows a network to be installed at substantial savings over legacy systems by eliminating costly backhaul and proprietary client devices. No large towers need to be constructed; no streets need to be excavated.

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[1] In the Matter of Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, *Notice of Proposed Rulemaking*, WT Docket 07-195, FCC 07-164 (September 19, 2007)

The system's capacity is designed for advanced applications delivering voice and video. Portable wireless devices, now mass produced to operate in the non proprietary Wi-Fi environment, further reduce cost and expand consumer choice.

Tropos technology transmits broadband- video, photographs, voice and the range of other applications at high speed and high service quality, paralleling those promised by Advanced Wireless Services. End user speeds on Tropos metro area networks today are 500kbps-2Mbps, symmetric (download and upload), with speeds in the near future beyond 4Mbps. The cost efficiencies obtained from the technology's wireless routers flow from eliminating the excessive infrastructure, routing overhead and signal degradation associated with legacy systems. With its partners, Tropos has emerged as a facilities-based broadband provider in a broadband market that lacks connectivity and competition.

Tropos has deployed systems in more than 30 countries. Large, medium and small networks are now providing broadband where there was previously no or little choice. Oklahoma City's public safety network encompasses more than 600 square miles of coverage. The Corpus Christi, Texas joint use network covers more than 100 square miles and reaches 90% of the city's 277,000 residents. Once fully deployed, the Philadelphia network will be 137 square miles. Covering 230 square-miles with the Tropos Wi-Fi network, Tucson's ER-Link enables doctors to use video and vital information telemetry to gain a sense of the severity of a patient's condition by viewing and in some cases speaking to patients in real time from Fire Department ambulances en route to the hospital. Google's Mountainview, California network has experienced almost 10 percent growth each month since it was deployed in mid-2006..

The 2155-2175 MHz Band Should Afford Opportunity for Unlicensed Operations

Unlicensed operations in the 2155-2175 MHz Band will enhance competitive broadband immeasurably and do so through a market driven structure. The extensive consumer advocacy during the Commission's consideration of the applications of M2Z, Inc. and others to designate the band for low cost broadband, open access and non proprietary equipment, will be served by designating 2155-2175 MHz for unlicensed use. The extent of consumer participation reflects the large gap that exists between demand for cost efficient broadband and what the current market provides.[2] The Commission's objective to promote a variety of applications, including those using voice and data (such as Internet browsing, message services, and full-motion video) content can be met today through unlicensed operations.

Wi-Fi's use of unlicensed spectrum, its explosive proliferation, has provided consumers, businesses and governments with a tangible and affordable competitive alternative. It has fueled the vast and ever-growing demand for a variety of Wi-Fi-enabled devices and anytime, anywhere broadband data access.[3] There is near universal

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[2] In the Matter of Applications for License and Authority to Operate in the 2155-2175 MHz Band, Petitions for Forbearance Under 47 U.S.C. § 160, *Order*, WT Docket No. 07-16, WT Docket No. 07-30, FCC 07-161 (August 31, 2007).

[3] Wi-Fi provides broadband connectivity for devices beyond laptops. It connects phones, PDAs, gaming devices, video cameras, parking meters, utility meters and sensors that detect biological, chemical and radioactive hazards and other applications. There are millions of unlicensed Part 15 devices using spectrum for a variety of purposes - including remote meter reading, utility load management, cordless telephones, wireless local area networks, and other diverse applications. *See,* Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, *Notice of Proposed Rulemaking,* 21 FCC Rcd 2809; 2812 (2006).

embrace for new unlicensed spectrum to meet the challenge of broadband deployment in rural areas."[4]

The contention based protocols of unlicensed devices will allow effective and efficient use of the 2155-2175 MHz band by several interests rather than one or a few, in contrast to the licensed or other proposals addressed by the *NPRM* and predecessor proceedings. In a shared spectrum environment, with no exclusive usage right and no interference protections, the unlicensed technology has the responsibility to ensure adequate interference management. As a condition of operation, unlicensed devices may not cause harmful interference to licensed services and other unlicensed devices. Unlicensed devices accept interference that they receive and are subject to strict emission limits.

Instead of having the freedom from interference that pervades the licensed spectrum model, shared spectrum technology must directly confront it. Investment is directed toward compatibility with other users and interference management. Coexistence with co and adjacent channel users is the foundation of unlicensed technology and the investment behind it. The history of the unlicensed broadband environment is its ability to confront shared and mixed use to deliver higher quality service.

Unlicensed operations in the 2155-2175 MHz band will complement and afford substantial efficiencies to the unlicensed operations in the 2400 MHz band that will accrue to consumers immediately. A significant benefit of unlicensed spectrum, particularly for rural areas, is that users are free from the costly licensing process, notably

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[4] *NPRM,* Statement of Commissioner Michael J. Copps at page 84, Remarks of Commissioner Copps, Practicing Law Institute/FCBA, Washington, DC, 2006 FCC LEXIS 6563 (December 15, 2006).

the cost of spectrum and the accompanying delays. The result is more rapid deployment of affordable broadband by a facilities based provider.

Tropos technology, operating in unlicensed shared spectrum, delivers broadband at speeds and quality of services exceeding incumbent providers at substantially reduced costs. The technology is capable of multiple band use that expands broadband capacity and service. The deployed networks are today providing individuals, businesses and governments low-cost broadband. Tropos and its customers demonstrate that contention-based technologies facilitate sharing and, when combined with low entry barriers, will promote investment ensuring robust, efficient and expeditious use of the 2155-2175 MHz band at significantly lower prices to the consumer.

The demand for cost efficient broadband service so embraced by consumers in the Commission's proceedings addressing the 2155-2175 MHz band can be met quickly and at low cost. Tropos urges the Commission to designate the 2155-2175 MHz band for unlicensed operations.

Respectfully submitted,

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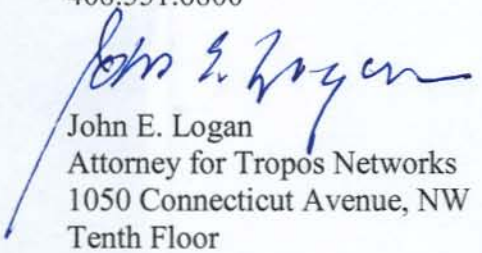

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